

WORK PAPERS OF SIL-AAB

Series A Volume 1

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PREFACE

These Workpapers are being produced in two series by the Summer Institute of Linguistics, Australian Aborigines Branch, Inc. in order to make results of SIL research in Australia more widely available. Series A includes technical papers on linguistic or anthropological analysis and description, or on literacy research. Series B contains material suitable for a broader audience, including the lay audience for which it is often designed, such as language learning lessons and dictionaries.

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Because of the preliminary nature of most of the material to appear in the Workpapers, these volumes are being circulated on a limited basis. It is hoped that their contents will prove of interest to those concerned with linguistics in Australia, and that comment on their contents will be forthcoming from the readers. Papers should not be reproduced without the authors' consent, nor cited without due reference to their preliminary status.

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INTRODUCTION TO
SERIES A VOLUME I

The papers in this volume are descriptions of aspects of the phonologies of five Australian Aboriginal languages. Some have been written after detailed analysis and published to make data available, e.g. Alyawarra Phonology by Nancy Turtle. Others are the result of shorter periods of field work and analysis. These are being made available in preliminary form here and may be further edited and published more widely in the future.

TABLE OF CONTENTS

Preface	iii
Introduction to Series A Volume I	iv
ALYAWARRA PHONOLOGY , by Nancy Turtle	1
0. Introduction	1
1. Interpretation	1
1.1 Interpretation of Ambivalent Consonant Sequences	1
1.2 Interpretation of Ambivalent Vowel Sequences	15
2. The Phonological Word	19
2.1 The Phonemes	19
2.2 The Syllable and Distribution	38
2.3 The Stress Pattern	48
Abbreviations	51
Footnotes	52
Bibliography	56
A TENTATIVE DESCRIPTION OF THE PHONEMES OF THE NGALKBUN LANGUAGE (INCLUDING A SMALL WORD LIST) , by John Sandefur and David Nangan:golod Jentian	 57
0. Introduction	57
1. The Syllable	58
1.1 Distribution of Syllables	58
1.2 Distribution of Phonemes in Syllables	59
1.3 Syllable Contraction	62
2. Stress	6 ²
3. The Phoneme	64
3.1 Consonants	64
3.2 Vowels	69

	Page
4. Interpretation	72
5. Practical Orthography	73
Footnotes	74
Bibliography	75
Appendix	77
NOTES ON RHYTHMIC PATTERNING IN IWAIDJA, by Barbara J. Sayers and Noreen Pym	97
0. Introduction	97
1. Technique	97
2. Speed and Timing	98
3. Pitch and Rhythmic Segmentation	100
4. Tensity of Articulation	102
5. Grammatical Features	102
Texts	105
Bibliography	130
WHAT ARE CONTRASTIVE SYLLABLES? THE WIK-MUNKAN PICTURE, by Barbara J. Sayers	131
1. Contrastive Types	134
1.1 Grounds of Contrast	134
1.2 Features of Contrast	135
2. Allowable Variants	138
3. Distribution	138
4. Discussion	138
4.1 The Unstressed Syllable and the Phonemic Status of Schwa	138
Bibliography	143

	Page
A PHONOLOGICAL ANALYSIS OF FITZROY CROSSING CHILDREN'S PIDGIN, by Jill Fraser	145
0. Introduction	145
1. The Development of FXCP	146
2. Basilect Consonants	150
2.1 Consonant Contrasts	150
2.2 Consonant Variation	153
3. Basilect Vowels	155
3.1 Vowel Contrasts	155
3.2 Vowel Variation	157
4. Interpretation of Vowel Glides	159
5. Distribution of Phonemes	161
5.1 Consonant Distribution within the Phonological Word	161
5.2 Vowel Distribution within the Phonological Word	164
6. Syllables of FXCP	166
7. Distribution of Syllables in Words	166
8. Stress of Intonation	168
8.1 Stress in Non-Prepause Environment	168
8.2 Intonation and Stress in Prepause Environment	169
9. Basilect-Acrolect Discussion	170
10. Recommendations	189
10.1 Recommendations Regarding FXCP	189
10.2 Recommendations Regarding APE	198
11. Texts	198
Acknowledgments	201
Footnotes	202
Abbreviations	203
Bibliography	204

A TENTATIVE DESCRIPTION OF THE PHONEMES
OF THE NGALKBUN LANGUAGE
(INCLUDING A SMALL WORD LIST)

John Sandefur and David Nangan:golod Jentian

0. INTRODUCTION

Ngalkbun is the language spoken by many of the adults in the Aboriginal community at Bamyili, Northern Territory. Different neighbouring language groups also use the names Dalabon and Buan when referring to the Ngalkbun language. The children, however, do not speak this language but speak an English Creole as their mother tongue and English as their second language.

The Bamyili Aboriginal community felt the need for an Aboriginal language to be taught to the children. They chose Ngalkbun as the language to be taught and David Jentian, an Aboriginal Teaching Officer, was asked to develop a "revitalisation" programme. In its early stages this programme has two main thrusts. The first one is the teaching of Ngalkbun in oral language classes for the children in school. The second is the developing of some Ngalkbun literature and the preparation of bridging materials, specifically some primers designed to assist adults who are literate in English to make the transition from reading in English to reading in Ngalkbun. To carry out such a programme an alphabet was needed.

Most of the phonemic analysis presented in this paper was done at the Summer Institute of Linguistics in Darwin, from 28th August to 7th September, 1973. Mick Panter and Ronny Kentea who speak Ngalkbun as their mother tongue acted as language helpers and provided the data used in this paper. David Jentian began the compilation of the word list and gave invaluable help in the analysis of the data because of his knowledge of elementary linguistics gained while at the Aboriginal Teacher Trainees Course in Darwin.

A further two weeks were spent at Bamyili with the same two language helpers checking the major "problem" areas in the analysis.

Partial checking of and additions to the word list were also handled at this time by John Sandefur, Mick Panter and Ronny Kentea.

We wish to thank Miss Velma Leeding of the Summer Institute of Linguistics for her consultant and editorial advice during the analysis of the data and the presentation of this material.

The present phonemics statement is a routine data paper designed as a basis for further investigation and analysis. The conclusions are only tentative, some being only initial observations. The model used for this paper is that of K. L. Pike (1947).

1. THE SYLLABLE

The syllable has been chosen as the basic unit for description. There are three emic syllable types:

CV	/t̥e/	'nose'
CVC	/t̥en/	'tongue'
CVCC	/t̥ulŋ/	'bulldust'

1.1 DISTRIBUTION OF SYLLABLES

Words most frequently consist of from one to four syllables. A few words of five or six syllables have been found to date. Distribution of syllable types in the word is unrestricted.

Word boundaries have tentatively been determined by the following criteria:

- (i) isolability
- (ii) native reaction
- (iii) pauses between sequences of sound in slow speech

One syllable words:

CV	/t̥e/	'nose'
CVC	/t̥en/	'tongue'
CVCC	/t̥ulŋ/	'bulldust'

Two syllable words:

CV.CV	/tʃila/	'axe'
CV.CVC	/toluk/	'witchetty grub'
CV.CVCC	/po uʀŋ/	'red ant'
CVC.CVC	/pa kiʃ/	'wallaby (male)'
CVCC.CVC	/pa ʔkan/	'boomerang'
CVCC.CVCC	/waʀkwaʀk/	'red ant'

Three syllable words:

CV.CV.CV	/kuʀula/	'night bird'
CV.CVC.CV	/kuʃuʔno/	'black'
CV.CVCC.CV	/keʃalʔno/	'new leaf'
CVC.CVC.CV	/kunʃku pa/	'black currant'
CVCC.CVCC.CV	/ko ʔko ʔno/	'night time'

Four syllable words:

CV.CV.CV.CV	/kuʀuʃaʃu/	'carpet snake'
CVC.CV.CV.CV	/ŋaʔwuʃamu/	'sharp stick'
CVCC.CV.CV.CV	/wuʀʔwuʀuŋnu/	'old man'

Five syllable words:

CVC.CV.CV.CVC.CV	/taʃpaʃapaʔno/	'afternoon'
CVCC.CV.CV.CV.CV	/nʃerʔŋuʃamiyi/	'white skin'

Six syllable words:

CVC.CVC.CVC.CV.CV.CVC	/ŋaʔyenjyenʃtʃuŋiyan/	'I will be talking'
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1.2 DISTRIBUTION OF PHONEMES IN SYLLABLES

All vowels may occur in any vowel position in the syllable and word.

All consonants except /ʔ/ may occur syllable initially. All consonants except /y/ and /w/ may occur syllable finally and word finally. The consonants /ŋ/ and /ʃ/ do not occur word initially.

Within the syllable,¹ the first consonant of a consonant cluster is /m/, /nj/, /ŋ/, /ʃ/, /r/, /l/, or /!/. The second consonant of the cluster is /k/, /ʔ/ or /ŋ/.

/ʃk/	/waʃkwaʃk/	'red ant'
/lk/	/kɪŋaɪk/	'ibis'
/ʃŋ/	/po!uʃn/	'red ant'
/lŋ/	/ŋjeɪŋkun/	'it's ours'
/mʔ/	/ŋaʔtʊmʔka/	'I pierce'
/njʔ/	/manʔkenɪnjʔ/	'what is it?'
/ŋʔ/	/kaŋʔno/	'night time'
/ʃʔ/	/teʃʔyaʔno/	'morning'
/rʔ/	/ŋaʔweʔʔmu/	'I vomit'
/lʔ/	/ŋjɪlʔno/	'rain'
/!ʔ/	/ko!ʔko!ʔŋo/	'night time'

Across syllable boundaries, all consonants except /y/ and /w/ may occur as the first consonant of the dicluster. Any consonant except /ʔ/, /ŋ/, /r/ and /ʃ/ may occur as the second consonant but /t/, /l/ and /!/ seldom occur in this position.

Stop plus stop:

/pokotʔpokotʔ/ 'river pigeon'

Stop plus nasal:

/ŋaʔtʔatʔmu/ 'I break it'

Stop plus semi-consonant:

/kotwoŋ/ 'frog'

Glottal plus stop:	
/ŋaʔpaʔka/	'I break it'
Glottal plus nasal:	
/pa aʔno/	'snake track'
Glottal plus semi-consonant:	
/teʔiʔyaʔno/	'morning'
Nasal plus stop:	
/puyonki/	'long way'
Nasal plus nasal:	
/ŋonno/	'big group'
Nasal plus semi-consonant:	
/punyupunyu/	'little lizard'
Lateral plus stop:	
/ʔulpu/	'ashes'
Lateral plus nasal:	
/pulnu/	'them'
Lateral plus semi-consonant:	
/kalwan/	'goanna'
Semi-consonant plus stop:	
/taɾpaŋʔ/	'yesterday'
Semi-consonant plus nasal:	
/taɾmuno/	'tree root'
Semi-consonant plus semi-consonant:	
/paɾwe/	'blunt edge'

Semi-consonant plus lateral:

/mannulořloř/

'Adam's apple'

Triclustering of consonants can only occur word medially across syllable boundaries. The following consonants have been found to occur as the third consonant. Following /ʔ/ the consonants /p/, /t/, /tʃ/, /k/, /m/, /n/, /ŋ/, /y/ and /w/ may occur. Following /k/ only /w/ and /n/ occur, and following /ŋ/ only /n/ has been found to date.

/ʔ/ plus stop:

/tʃuřʔtʃuřʔno/

'quick'

/ʔ/ plus nasal:

/ŋaʔmařʔmařʔ/

'I am shivering'

/ʔ/ plus semi-consonant:

/yiřʔyiřʔpe/

'underneath'

/k/ plus /w/:

/wařkwařk/

'red ant'

/k/ plus /n/:

/keʃalkno/

'new leaf'

/ŋ/ plus /n/:

/ŋoŋno/

'sky'

1.3 SYLLABLE CONTRACTION

In fast speech, the vowel /a/ occurs as only a quick transition or is omitted in the open unstressed syllable of several words. It seems to occur preceding a lateral or /r/ and results in syllable-initial consonant clusters.

/tʃabale/ [ʔtʃab[^]le]

'shoulder blade'

[ʔtʃable]

/tʃalaʔkaratʃ/ [ʔtʃalaʔk[^]ratʃ]

'fish spear'

[ʔtʃalaʔk[^]ratʃ]

/malemale/ [mʌ' | ɛmʌ'' | ɛʔ]

'red butterfly'

[m' | ɛm'' | ɛʔ]

2. STRESS

Stress appears to be predictable according to the following rules:

- (i) Primary stress (') normally falls on the penultimate syllable of the word.

/moʔʌnʔ/ [ʰmoʔʌnʔ]

'wild honey (from the ground)'

/ŋaʔʕun/ [ʰŋaʔʕun]

'I cry'

- (ii) In three syllable words primary stress falls on either the initial or penultimate syllable. When the initial syllable is closed with a final /ʔ/, stress always falls on the penultimate syllable. In fast speech, stress usually occurs on the initial syllable.

/nakomtuʔ/ [ʰnakomtuʔ]

'little boy'

[nʌ''komtuʔ]

/ŋaʔʔoʕmu/ [ŋaʔ''ʔoʕmu]

'I cough'

- (iii) In words of four or more syllables, primary stress falls on the penultimate syllable and secondary stress (ʰ) on the initial syllable.

/wulʌkuntʃannan/ [ʰwulʌkuntʃannan]

'my younger sister'

/taʕpaʃapaʔŋo/ [ʰtaʕpaʃa''baʔŋo]

'afternoon'

/ŋaʔyenjyenjʔunjiyan/ [ʰŋaʔyenjyenj''ʔunjiyan]

'I will talk'

- (iv) Stress falls on both morphemes of reduplicated roots.

/paŋapaŋa/ [ʰbaŋa''baŋa]

'rib bones'

/punyapunya/ [ʰbunya''bunya]

'little lizard'

3. THE PHONEME

There are 22 phonemes in Ngalkbun, of which 17 are consonants and 5 are vowels.

The consonants consist of six stops, five nasals, two laterals and four semi-consonants. The active articulator for the apico-alveolar and retroflexed series is the tongue tip but the lamino-palatal is articulated with the tongue blade.

	Bilabial	Apico-Alveolar	Lamino-Palatal	Retroflex	Velar	Glottal
Stop	p	t	t̟	ʈ	k	ʔ
Nasal	m	n	ɲ	ɳ	ŋ	
Lateral		l		ɭ		
Semi-Consonant	w	ɣ	y	ɣ̣		

The distinctive features of the vowels are the back and non-back positions with high, mid and low tongue height.

	Non-back	Back
High	i	u
Mid	e	o
Low	a	

3.1 CONSONANTS

Stops:

The stops contrast at six points of articulation. The phonetic description is as follows:

- /p/ [p] Devoiced bilabial unaspirated stop. Occurs in all positions. /pono/ 'river'.
- /t/ [t] Devoiced alveolar unaspirated stop. Occurs in all positions. /toluk/ 'witchetty grub', /mat/ 'ankle'.
- /t͡ʃ/ [t͡ʃ] Devoiced lamino-palatal unaspirated stop. Occurs in all positions. /t͡ʃabale/ 'shoulder'.
- /t̚/ [t̚] Devoiced retroflexed unaspirated stop.² Occurs in all positions. /wu̚t̚u̚t̚/ 'piccaninny'.
- /k/ [k] Devoiced velar unaspirated stop. Occurs in all positions. /kakak/ 'grandmother'.
- /ʔ/ [ʔ] Voiceless unaspirated glottal stop. Occurs only syllable final. /woʔ/ 'yes', /t͡ʃiʔpi/ 'north'.

Contrasts can be seen in the following sets of examples:

Word initial:	/pḁt̚no/	'knee'
	/tapkun/	'knife'
	/t͡ʃapale/	'shoulder'
	/katam/	'tooth'
Word medial:	/ku̥t̚upu/	'plains kangaroo (male)'
	/ŋutuno/	'feelings'
	/ku̥t̚uŋ/	'big lily'
	/wu̥t̚u̥t̚/	'piccaninny'
	/t̚ukula/	'possum (male)'
Word final:	/mat/	'ankle'
	/ŋḁʔat͡ʃ/	'white cockatoo'
	/pḁt̚/	'knee'
	/ŋḁʔkak/	'I am clearing my throat'
	/pakaʔ/	'big group'

Voiceless and voiced stops tend to vary freely in all positions. Aspiration can also occur on devoiced stops, mainly in word initial and final positions. One informant had a tendency to substitute the voiceless labio-dental fricative [f] for [p] in the stressed syllables of a word which he was emphasizing. Another informant had a tendency to substitute the alveo-palatal affricate [tʃ] for [tʰ] in slow, emphasized speech.

The glottal stop has several allophones. When the glottal stop precedes another consonant it tends to assimilate to the point of articulation of the following consonant, and is phonetically an unreleased stop. This occurs most frequently preceding bilabial and velar stops. It has also been noted that it can assimilate to the point of articulation of the preceding consonant but data is not sufficient to allow a concise statement to be made.

/meɪʔpe/	[mɛ!ʔ ^p pe]	'wallaby (female)'
/ko!ʔko!ʔno/	[kɔ!ʔ ^k kɔ!ʔ ^k no]	'night time'

Nasals:

Nasals contrast at five points of articulation. The phonetic description is as follows:

/m/	[m]	Voiced bilabial nasal. Occurs in all positions. /mumumut/ 'eyebrow'
/n/	[n]	Voiced alveolar nasal. Occurs in all positions. /naʔaʔpon/ 'we go'
/nj/	[nj]	Voiced lamino-palatal nasal. Occurs in all positions. /njaʔmu/ 'good'
/ŋ/	[ŋ]	Voiced retroflexed nasal. Occurs in all positions except word initial. /paŋamaʔ/ 'black cockatoo'
/ŋ/	[ŋ]	Voiced velar nasal. Occurs in all positions. /naʔaʔtʃ/ 'white cockatoo'

Contrasts can be seen in the following sets of examples:

Word initial:	/maʔu/	'hair'
	/naʔaʔpon/	'we go'

	/njařmu/	'good'
	/ŋařatʃ/	'white cockatoo'
Word medial:	/buřama/	'good'
	/ʃanayl/	'little goanna'
	/wanjiŋ/	'one'
	/paŋamař/	'black cockatoo'
	/moŋořořok/	'blanket lizard (female)'
Word final:	/wořpam/	'three'
	/ʃampan/	'spotted goanna'
	/tanj/	'spear'
	/panjiŋ/	'skin group (female)'
	/pokaʔpaŋ/	'he's biting him'

Laterals and Semi-consonants:

Laterals contrast at two points of articulation and semi-consonants contrast at four points. The phonetic description is as follows:

- /l/ [l] Voiced alveolar lateral. Occurs in all positions except post-consonantal. /toluk/ 'witchetty grub'
- /ɭ/ [ɭ] Voiced retroflexed lateral. Occurs in all positions except post-consonantal. /poɭuřŋ/ 'red ant'
- /w/ [w] Voiced high close back rounded non-syllabic vocoid. Occurs only syllable initial. /pařwe/ 'blunt edge'
- /ř/ [ř] Voiced mid close central unrounded flapped vibrant. Occurs in all positions except word initial and post-consonantal. /mařu/ 'hair'
- /y/ [y] Voiced high close front unrounded non-syllabic vocoid. Occurs only syllable initial. /ŋaʔpuyan/ 'I hit him'

/r/ [r] Voiced mid close central unrounded retroflexed resonant. Occurs in all positions. /namaṛunkiṭṭ/ 'god'

Contrasts can be seen in the following sets of examples:

Word initial:	/liṭka/	'to pinch'
	/ṛiṭṭino/	'stony ground'
	/lanṅano/	'water bug'
	/ṛaṭa/	'sandy ground'
	/yaṛaman/	'horse'
	/waṛuṛʔku/	'nulla nulla'
Word medial:	/toluk/	'witchetty grub'
	/poṭuṛṅ/	'red ant'
	/namaṛunkiṭṭ/	'god'
	/maṛu/	'hair'
	/naṭakayen/	'teenage boy'
	/kaṛala/	'spoonbill'
	/mulmu/	'paper bark tree'
	/ṅuṭmiyi/	'dark colour'
	/paṛmiyi/	'white'
	/ṅuṛmiyi/	'red'
	/yawokyawok/	'school age girl'
	/waṛkwaṛk/	'red ant'
Word final:	/mimal/	'fire'
	/kumakaṭ/	'geese'
	/ṅaṛmaṛ/	'I want to go'
	/namaṛʔ/	'rock kangaroo (male)'

The phoneme /l/ may have an allophone, viz. an alveolar flapped lateral [l̥]. This sound tends to occur in fast speech in variation with [e] preceding a word medial [ʔ]. The identification of this sound is difficult and no satisfactory statement can be made as yet.

/waʔnjilʔno/	[waʔnjil̥ʔno]	'rain'
	[waʔnjilʔno]	
/palʔkitʃ/	[pal̥ʔkitʃ]	'wallaby (male)'
	[palʔkitʃ]	

3.2 VOWELS

The five emic vowels contrast, as shown in the following sets of examples:

Word medial:	/tɪlʔmu/	'to paint oneself'
	/tɛltɛl/	'red ant'
	/taluno/	'mouth'
	/toɪuk/	'witchetty grub'
	/tuɪʔ/	'tree'
Word final:	/kulyampi/	'bark boat'
	/meɪʔpe/	'wallaby (female)'
	/kunjkuɪpa/	'black cockatoo'
	/ʔopo/	'butcher bird'
	/kuʔupu/	'plains kangaroo (male)'

The allophones of each vowel, together with a phonetic description, are as follows:

- /i/ [i] Voiced high close front unrounded vowel. Occurs in all vowel positions. /mimi/ 'grandmother'
- /e/ [ɛ] Voiced mid open front unrounded vowel. Occurs in all vowel positions. /nalmerɛn/ [nalmerɛn] 'teenage girl'

- [e] Voiced mid close front unrounded vowel. Tends to occur word-finally in fluctuation with [ɛ].
/kaʔke/ [ka^kke] [ka^kke] 'nothing'
- [ɛ^ʰ] Voiced vowel gliding from mid open front to high front position. Occurs preceding lamino-palatal consonants. /boyeŋj/ [boye^ʰŋj] 'big'
- [æ] Voiced low close front unrounded vowel. Tends to occur contiguous to lamino-palatal consonants in fluctuation with [e] and [a]. /ʔe^ʰŋuno/ [ʔæ^ʰŋuno] [ʔe^ʰŋuno] 'new'
- /a/ [a] Voiced low close central unrounded vowel. Occurs in all vowel positions. /kagak/ 'grandmother'
- [ʌ] Voiced mid open central unrounded vowel. Tends to occur in unstressed open syllables in fluctuation with [a]. /nakomtuʔ/ [nʌkomdu^ʰʔ] [nakomdu^ʰʔ] 'little boy'
- [a^ʰ] Voiced vowel gliding from low close central to high front position. Occurs preceding lamino-palatal consonants. /maʔun/ [ma^ʰʔun] 'carpet snake'
- [æ] Voiced low close front unrounded vowel. Tends to occur contiguous to lamino-palatal consonants in fluctuation with [ɛ] and [a]. /ʔatʔpe!^ʰpe!^ʰ/ [ʔætʔbe!^ʰbe!^ʰ] 'green parrot'
- /u/ [u] Voiced high back rounded vowel. Occurs in all positions. /mumumut/ 'eyebrow'
- [u^ʰ] Voiced vowel gliding from high back to high front position. Occurs preceding lamino-palatal consonants. /nakomtuʔ/ [nʌkomtu^ʰʔ] 'little boy'
- /o/ [ɔ] Voiced mid open back rounded vowel. Occurs in all vowel positions. /kontono/ [kontono] 'hard soil'
- [o] Voiced mid close back rounded vowel. Tends to occur word-finally in fluctuation with [ɔ]. /pono/ [pono] [pono] 'river'
- [ɔ^ʰ] Voiced vowel gliding from mid open back to high front position. Occurs preceding lamino-palatal consonants. /koʔno/ [ko^ʰʔno] 'his head'

The phoneme /i/ has a voiced high open front unrounded allophone [ɪ]. No satisfactory statement regarding its occurrence can be made at this time.

It will be noted that [æ] has been tentatively considered to be an allophone of two separate phonemes. It tends to be slightly fronted when it is an allophone of /e/ and slightly backed when it is an allophone of /a/.

The allophone [ʌ] also tends to occur as a transition vowel following [ʃ] in a consonant cluster.

/paʃwe/ [baʃ^ʌwe/baʃwe] 'blunt edge'

Vowels preceding retroflexed consonants may be retroflexed. The occurrence and degree of such retroflexion may be idiosyncratic.

/meʃen/ [mɛʃ^ɻen] 'spotted goanna'

/kiŋaɪk/ [kɪŋ^ɻaɪk] 'ibis'

Vowels contiguous to nasal consonants may be nasalized. The occurrence and degree of such nasalization may also be idiosyncratic. No satisfactory statement of its occurrence has yet been found.

/yaʔpun/ [ya^pɸʉn] 'two'

/ʃeŋuno/ [ʃeŋ^ɸuno] 'foot'

/weʃ^ɸmu/ [weʃ^ɸmu] 'to vomit'

All vowels seem to centralise to a high or mid position, sometimes retaining their round or unrounded quality. No satisfactory statement can be made yet as to the environments conditioning centralisation. The following observations, however, can be made:

- (a) Retroflexed or nasalised vowels tend to be centralised.
- (b) A central vowel tends to vary with [u] when contiguous to [ʃ].

/luʃ^ʌmiyi/ [lɪʃ^ʌmiyi] 'khaki'

/muʃuk/ [muʃ^ʌək] 'hard'

4. INTERPRETATION

Vowel Length

The high front lengthened vowel [i:] contrasts with its short counterpart in word final position.

/mimi/ [mimi] 'grandmother'

/ɟulmiyi/ [ɟulmi:] 'dark colour'

It is being interpreted as the sequence /lyi/ because:

- (i) No other vowels except this one have contrastive length.
- (ii) Native reaction and slow speech indicate two syllable peaks on the lengthened vowel.
- (iii) There is no non-suspect V syllable type in the language and no non-suspect VV clusters.

Vowel Glides

When high vowels /i/ and /u/ occur as offglides they are tentatively interpreted as semi-consonant plus vowel sequences, /yi/ and /wu/ respectively.

/woyi/ [wo^h] 'come here'

/maɟawuk/ [maɟa^uk] 'honey-eater'

Such an interpretation was based on the following criteria:

- (i) Native reaction and slow speech indicated both elements of the glide were syllabic.
- (ii) No non-suspect V syllable types occur in the language, and no non-suspect VV clusters.

Lengthened Nasals

At morpheme boundaries two identical nasals can occur. These are perceived as a lengthening of the nasal and are in contrast to a single nasal.

/ɟen/ 'tongue'

/ɟenno/ [ɟen:o] 'his tongue'

/tɛ/

'nose'

/tɛno/ [tɛno]

'his nose'

5. PRACTICAL ORTHOGRAPHY

The immediate purpose of this study of Ngalkbun phonology is to provide an alphabet for use in the language "revitalization" programme. There are three main considerations involved in the selection of a practical orthography. The first two are outlined in Velma J. Leeding and Sarah C. Gudschinsky (1974):

- (i) "The orthography should be chosen to make learning to read as easy as possible for the beginner and also to allow the experienced reader to skim and to read new materials smoothly."
- (ii) ". . . the vernacular orthography should facilitate transition into English."
- (iii) Some Aborigines in the Bamyili community are bilingual in Ngalkbun and Maiali, a dialect of Gunwinggu. Gunwinggu has an established orthography and reading materials. It is preferable for the Ngalkbun orthography to parallel that of Gunwinggu so that interference between the two is minimised and reading facilitated for the bilinguals.

It is felt that the orthography selected meets the three considerations above. The only difference between the Ngalkbun orthography and the Gunwinggu is where vowel glides have been interpreted differently because of differences in the structures of the two languages.

Phonemic Orthography

Practical Orthography

p	b
t	d
tɛ	dj
tɛ	rd
k	k
ʔ	h
m	m
n	n
nj	nj

Phonemic
Orthography

Practical
Orthography

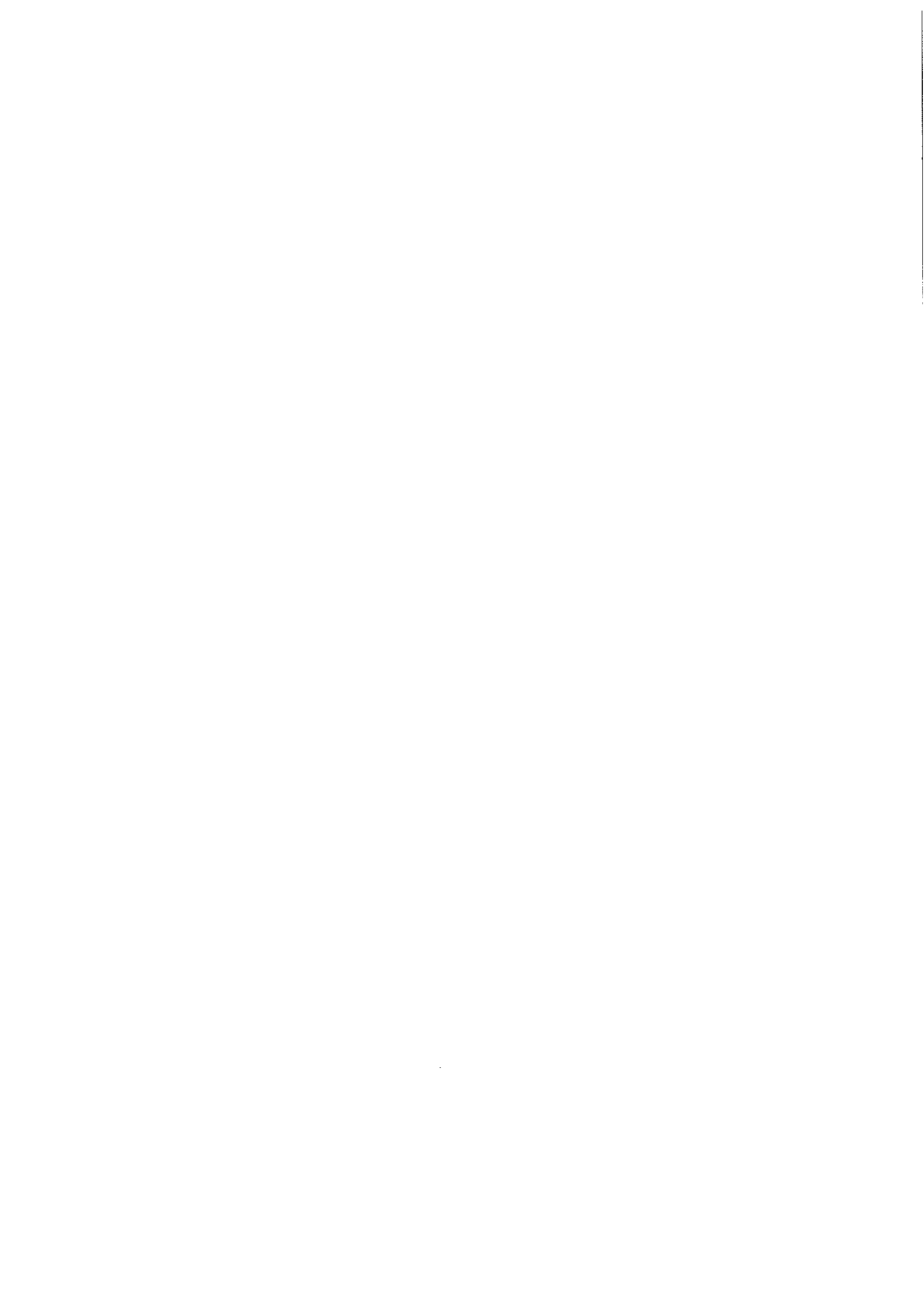
ɒ	rn
ɔ	ng
ɪ	l
ɪ̣	rl
ɾ	r
ɻ	rr
y	y
w	w
i	i
e	e
a	a
u	u
o	o

FOOTNOTES

1. This does not include clusters word final with /ʔ/ as the second consonant. The distribution of /ʔ/ in that position has not been thoroughly checked out.
2. The phoneme /ɾ/ may have an allophone, viz., voiced retroflexed flapped resonant [ɻ]. It is possible that the phonetic quality is more accurately described as [ɻ̣]. This allophone varies with [ɾ] between vowels, but no satisfactory statement about its distribution can be made at this time. /kuɾupu/ [kuɻubu/kuɾubu] 'plains kangaroo (male)'

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APPENDIX

NGALKBUN TO ENGLISH WORD LIST

The practical orthography is used in the following vocabulary items:

<u>Ngalkbun</u>	<u>English</u>
babka	to hit
badbelum	short rock snake
badunno	cave
bahka	to break
baladj	little leech
balak	cousin
balang	skin group (male)
balayi	further away, long way
balhno	snake track
balk	pimple
bang	to bite
bangardi	skin group (male)
bangarrang	wet season
bangirn	skin group (female)
bararrkun	small stone axe
bardakalamun	small water goanna
bardirrun	to rub
bardu	mosquite, March fly
barlahno	snake track
barlina	crooked
barlkan	boomerang
barmiyi	white
barnabarna	rib bones

barnabur bara	small magpie
barnamarr	black cockatoo
barnboyen	wide
barndahno	tree root
barndjoko	narrow
barngo	salty, bitter, cheeky
barrakbarrak	diver duck (land living)
barrdanging	two, four (?)
barrdidjhno	kidney
barrh-	they (dual)
barrmon	sharp
barrwe	blunt edge
bedu	chest
beduhmu	to walk towards, come
beka	smoke, tobacco
belhbelh	water bug
belinj	skin group (female)
bengkan	to know
benuk	turkey
bernba	big black butterfly
berruh	to come towards
bidjirri	brown file water snake
bidjurdu	whirlwind
bim	white clay, paint
birrhbirrh	rib bone
biyi	black person, Aborigine
bod	fly
bodhno	honey bee
bokodjbokodj	river pigeon
bokorrohkunj	last year
bolk	footprint
bololo	mulga
bolung	rainbow

bon	to go, come
bono	river
bonominiburru	big river
bordok	hook of woomera
borled	to turn
borloko	yellow belly water snake
borlurrng	red ant
bornorrng	broilga
borok	water yam
borrohborroh	rock pigeon
boyenj	big
budardbanghkunj	two days ago
budurruhmu	to wipe
buhdu	cradle, cot of paperbark
buhmu	to blow
bukarn	navel
bukorrehkun	before, long time past
bulanj	male skin group
bulanjan	female skin group
bulah-	they (plural)
buldjarn	middle
bulka	to go down
bulkidj	to be sick
-bulng	their (plural)
bulnu	them
bulnukun	theirs (plural)
bulu	father
bunukun	theirs (dual)
bunyubunyu	little lizard
burduyino	blood scab
burlhbarr	lily root
burluk	cotton for body decoration
burrarna	good

burrkun	two
-burrng	their (dual)
buyan	to hit
buyongki	further away, long way
dabhka	to shut
dabuno	egg
dadhbu	king brown snake
dadhkiyan	to cut
dadhno	firewood
dadjmu	to be tired
dahmaṅ	to get
dahno	short
dakano	saliva
dalukurlahno	lips
daluno	mouth
danj	spear
darbahngo	afternoon
darbangh	yesterday
daredjhno	dress
darrmuno	tree root
darru	leg
dawadak	beard, whiskers
dawurr	rock kangaroo (female)
deḡhded	blue parrot
dedhno	tail part, men's clothes
delhdelh	big red ant
dembukarr	day time
dengukudjkudjh	hot weather
dengukuno	sole of foot
dengumerango	ball of foot
dengunadhno	big toe

denguyayaruno	little toes
derrihyahno	morning
derrno	tomorrow
dilh	to paint
djadhberlhbelh	green parrot
djadhmono	upper leg
djah-	you
djahbon	come here!
djahdeyhdeyih	grasshopper
djahmiyan	to stab
djalahkradj	fish spear
djalak	cold
djalamardawuk	wild passionfruit
djalawayi	salt water
djalhmiyan	to split
djamban	death adder
djanayi	little goanna
djangarak	jaw
djankil	turtle
djarra	here
djarri dj	ashes
djarrka	water goanna
djayidj	digging stick
dje	nose, nose part
djuh-	we (dual inclusive)
djekun	coolamon
djemudno	moustache
djen	tongue
djenj	fish
djerrungkuno	new
djihbi	north
dhihbulhngo	to be wet

djihdorrhngo	straight
djika	milk, breast
djikerdidj	little black bird
djila	axe
djingadarr	diving water, diver duck
djiribirninj	finger nail
djirrbiyuk	whistle duck
djohbo	butcher bird
djomono	track, path
djongok	aunt
djorhmu	to cough
djowok	black night bird (male)
djudjuyih	to push
djudno	nape of neck
djuhmu	to spit
djulbu	ashes
djulng	dust
djuludomdi	midday
djulu	shade
djuluh	smoke
djumu	to swim, bathe
djung	over there
djurrdjurrno	heavy
djurrerrk	big bird
djurrhdjurrhno	quick
djurrubuk	round
dohkan	to wake up
dohmin	to spew
dolkan	to get up
dolkuno	backbone
dolkuyu	to lay down
dolng	smoke

doluk	witchety grub
donj	to die
dorrngboyenj	fat
dorrung	body, to be alive
dubmi	today
dudhmi	today
dudjhmu	to return
duhkan	to tie
dukula	possum (male)
dulh	tree, stick
dulhmun	to be cold
dulmu	to swell up
duln	string, rope
dulumno	hill, mountain
dumhka	to pierce
dunno	hole
duwo	night bird (female)
kabumarda	stone axe
kada	morning star
kadjedh	knife
kah-	he
kahburla	very old man
kahburramo	correct
kahdjingkur l	fresh green growth
kahke	nothing
kahmayihka	lightning
kahmon	good
kahnunh	that's it.
kahrokrok	same
kahwehno	not good
kahyibhka	sunset

kahyin	not to know
kaladjidji	little dillybag
kalakala	white hawk
kahmu	to climb
kalidjan	skin group (female)
kaliyi	married person
kaljarawuk	night bird
kalwan	big goanna
kamanj	skin group (female)
kan	to take
kandji	jabiru (bird)
kanghno	night time
kanjno	meat
kanum	ear
karadjh	sugar
kardabun	long, high, tall
kardanj	ground fog, dew
kardu	not to know
karduno	old
karlh	five
karnarruk	mosquito
karndakunj	dingo
karndayl	plains kangaroo (female)
karndinj	barramundi
karr	up
karrala	spoonbill (bird)
karrandal	spinifex
karri	west
karrumono	lower leg
karrwohno	on top of
kedjalkno	new leaf
kela	skin group (male)

kenbo	after, any time
kerh	black stone spear
kermino	hook of woomera
kernalk	ibis
killirri	yellow
kin	to cook, burn
kingiyan	to cook
kinhkin	star
kiyerrh	chin
kobol	bandicoot
kodj	head, hook of woomera
kodjan	skin group (female)
kodjngol	cloud
kodjoburl	turtle (male)
kodjok	skin group (male)
kohmele	temple (of head)
kolhbarngo	salt water
kolhngun	to drink
kolhno	water
kolno	bird's nest
kolokolo	white gum tree
komborloh	white gum tree
komno	neck
kondono	hard soil
konjbam	big flying fox
konjdja	smooth anthill
kono	flower
kordawo	brolga
korlhkorlhngo	night time
korliblib	peewee (bird)
korlkorlk	pelican
korlodok	little pigeon

korrokorro
korrwan
korrwongkorrwong
kowuk
kubud
kuduburuk
kuhdjung
kukah
kulhka
kulmungono
kuluyambi
kumakarl
kumurduk
kunan
kung
kungan
kungurru
kunhmon
kunhwanang
kunhwe
kunj
kunjhmon
kunjkuriba
kunkunno
kurangarrh
kurbud
kurdhkurdhno
kurdu
kurdukurd
kuribano
kurihkuril
kurndal

kookaburra
white currant
green frog
bark, house
black antbed
true
big water lily
skin
to go and look
inside of a house
bark boat
geese
black currant tree
long yam
wild honey
stomach
eucalyptus tree
good country
to think
bad country
kangaroo
smooth
black currant
heavy
to sweat
antbed
emu hair
to be mixed up
single girl
dried blood
to run
black plum

kurndjiik	sugarcane
kurnh	place, country
kurnhweh	rough
kurumono	upper arm
kururkururr	budgerigar bird
kurra	wind
kurradh	grapes
kurralk	magpie
kurrhkurrh	vein
kurrmurlu	blue tongue lizard
kurrnga	moon
kurrngkubukhmu	to work
kurru	upper arm
kurrudjardu	brown snake
kurruk	mussel (fish)
kurrungarr	moon
kurrungku	strong man
kurrurru	sawfish
kurruwila	night bird
ladjmimj	to be dry
lahlayi	beside
lakayen	teenage boy
langano	waterhole
languno	hand
lirmurrunj	to scratch
lirrwuh	to be hot
loklok	long lizard
lolo	running water
lorrhno	empty
lowuhmang	to make bark for painting
lurruhmurrng	to wash oneself
lurrimi	khaki colour

madhdjurn	carpet snake
madhmer	to be hungry
madjno	swag
madno	heel
mak	no, don't
malanj	finger nail
malaworr	dead leaf, bushes
malhgobalayi	very long way
malhno	country
malhrdarnki	long way
malhwanang	to think
malnganarra	young flying fox
mambal	bush coconut
mambard	big billycan
mang	to get, pick up
mangkulorrlorr	Adam's apple
manjh	meat
manjhkeninjh	what is it?
mararrahkun	from last week
mardawuk	honey-eater (bird)
marla	scorpion
marlhno	liver
marliyomu	collar bone
marnarrh	red ochre
marnbun	to make
marnu	bush gum
marranguyi	stringy bark tree
marrhmarr	to shiver, shake
marrkidj	very good
marru	hair
marrumah	where
mayorrh	wind
melbe	mud

mele	blanket, bed
meleyak	widow, widower
merdumerdu	chest
meren	spotted goanna
merlemerle	butterfly
merlerberno	hips
merlhbe	wallaby (female)
merni	shoulder
meyi	food
midjhno	burrow
mihbarr	eagle hawk
mimal	fire
mimi	grandmother (father's mother)
mimih	devil, first people
miyan	to get
moban	mud codfish
modjarn	wild honey taken out of the ground
modjhno	to be sick
molono	tail
mongorrorro	blanket lizard (female)
mono	bone
morlmorl	corroborree stick
morlomorl	blue fly
morlu	didjeridu
moyi	green plum
muda	sun
mudhno	feather
mudumani	hook boomerang
mudumudulan	hollow-tree snake
muhka	to bury
mulungu	elbow
mumu	eye
mumudjamud	eyelashes

mumumalu
mumumud
munanga
munayin
murdurdu
muriyurrunj
murruk

naderr
nahbu
nahngan
nakomdudj
nakornhko
nalah-
nalakayen
nalward
namarunkidj
namarr
nan
nanyird
narrah-
naworrkori
nayunghyungki
ngadjinno
ngadungiyan
ngah-
ngahbun
ngahdji
ngakerd
ngalkerd
ngalmeren
ngalyurr
-ngan

tears
eyebrow
white person
before dawn
caterpillar
ironwood tree
hard

devil
to dance
mother
little boy
god
you (plural)
teenage boy
stone
father god
rock kangaroo (male)
to look
small kangaroo
you (dual)
green ant
first generation of man
throat
to go to the toilet
I
to give
to sneeze
old man
old woman
little girl
lightning
my

nganjdjarrmarli	little lizard
ngankal	duck
ngarlahdja	urine
ngarlanno	shell, tin
ngarlbak	chin
ngarra-	we
ngarradj	white cockatoo
ngarra-	we (plural inclusive)
ngarrarla	porcupine
ngarrkunno	baby
ngarridj	skin group (male)
ngarridjan	skin group (female)
ngarrinjno	fingers
ngarrngarr	long yam
ngekun	my, mine
ngel	plum tree
ngerhno	heart
ngeyi	me
-ngokorrng	ours (plural inclusive)
ngolno	sky
ngongno	large group/amount
ngongyawuno	small group/amount
ngordokordhno	ankle
ngorr	us (plural)
ngorrkan	to bring
ngorrkarn	ours (dual)
ngorrkun	ours (plural inclusive)
-ngu	your
nguhlorrhno	guts
ngulmiyi	dark color
ngun	to eat
ngurldul	thunder
ngurIno	heart

ngurrdung	to hate
ngurrkuno	honey
ngurrmiyi	red
ngurru	big catfish
ngurrudu	emu
ngurruno	rotten
ngurrurdu	emu
nguyi	fire, matches, electric light
ni	to sit
nibalirr	big dillybag
niyan	to see
njamkah	toilet
njarlhmu	to play
njehkun	ours (dual inclusive)
njel	we (plural exclusive)
njelkun	ours (plural exclusive)
-njelng	our (plural exclusive)
njerhmang	to be hot
njerrhngurrumiyi	white skin, white person
njerrhno	raw, uncooked
njerrkun	ours (dual exclusive)
-njerrng	our (dual exclusive)
njing	your
njingkun	yours
njinguyu	to sleep
-njung	our (dual inclusive)
njuridj	small honey-eater (bird)
-no	his
-nokorrng	your (dual)
nokun	his
no!	you (plural)
no!kun	yours (plural)

nolyi	three
nomu	to smell
norrkun	yours (dual)
noyido	dingo
nunda	this one
nurrungurru	gecko
nurruno	rotten
radja	sandy ground
radjanoka	cooking sand
rahkan	to fall down
rakmono	hips
ramberambu	pandanus snake
rawala	stone axe
redjhkun	close
redjing	to laugh
rididjino	stony ground
rolhngo	maggot
rolu	dog
rorrng	east
rulhngo	bush, scrub
rumu	river pigeon
run	to cry
rung	to burn
wadan	blanket lizard (male)
wadangu	camp, home
wadjalno	lung
wadung	to crawl
wah	water
wahdong	to be thirsty
wahdu	devil

wahka	urine
wahnjilkno	sprinkling rain
wakwak	crow
walarrknurrng	to wash things
waldjenno	flame, burn
walum	south
waluno	ripe, cooked
wamud	skin group (male)
wamudjan	skin group (female)
wan	to follow
wanan	to hear
wanjh	looks alike
wanjing	one
wanjno	armpit
wanumono	lower arm
wardabidj	billy-goat plum
warlang	big bat
warlirr	dry season
warnkano	wing
warnuno	arm, wing
warrakurl	possum (female)
warrdjird	butcher bird
warrkwarrk	red ant
warruhku	nulla nulla
wawurd	big brother
wayining	to sing
wehno	bad
welayi	rosella
welno	wing
weredj	small fish
werhbon	to walkabout
werhmu	to vomit
werrno	shed skin

wirlihwirlih	galah
wiyan	to follow
wodhnan	to throw
woh	yes
wohrdi	to stand up
woluno	cooked, ripe
wombanno	not heavy
womoro	pandanus (plains type)
worrbam	three
worrhko	rain water
worrminj	full
worrno	tea leaf
worrok	to jump
woyi	come here!
wulhno	fat
wul kundjanngan	little sister
wul kunngan	little brother
wurdurd	piccaninny
wurr	grass
wurrka	to blow
wurrmadhmer	thin
wurrukurduk	black snake
yabokngan	older sister
yahbun	two
yakngarra	pandanus
yalankuhdu	wood with white ants
yamarrah	tooth
yamiyan	to speak
yangno	language, talk
yarl	string, rope
yarr	crayfish

yarraman
yawan
yawokngo
yawokyawok
yaworrinji
yawuno
yawurrinj
yeku
yenjdjung
yerinj
yibung
yibungkarn
yibungkun
yidjhnjan
yininj
yirrbiyirrbj
yirrhyyirrhbe
yirringkan
yoh
yorrom
yorryorrh
yu
yudhmu
yulubing
yuluno
yunkurrno
yurrmon

horse
to look for
schoolgirl
little schoolgirl
single man
small
young man
cold weather
to talk
white owl
him, he
his
his
to wait for
to have said
straight
underneath
to pull
feelings
water from a soak
specific bird
to rest
to run
to dig
ground, dirt
sandhill
cheeky, silly, stupid